Using Razi2 Cells to Replicate Fowl Pox Virus (FPV)

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Background & Objectives: Pox virus (FPV) is a member of the known family pox viridea whose symptoms are skin nodes, necrotic membranes in mouth and upper part of respiratory system. fowl-pox is very important economically because it ceases egg production and results in poultry loss. for replicating the mentioned virus, two Methods are used: cell culture and (SPF)eggs inoculation. As a matter of fact, SPF inoculation is the most common Methods but due to various problems including difficulty of inoculating into choryoallantoic membrane of eggs and many other problems in producing (SPF) eggs in the country, cell culture can be a suitable and cost-effective alternative. Nowadays, the most important cell lines used to culture this virus are chicken embryo fibroblast (CEF) and duck embryo fibroblast (DEC99).This research is aimed at using razi2 cell line to proliferate and culture of fowlpox virus (FPV).

Methods: At first, the best cell line is selected via MTT assay to proliferate the considered virus. razi2 cell line (one from series of razi cell lines), is the first cell line that prepared from the lizard tail, (*Crytopodion scabrum*). After that, adaptation is conducted and after completing CPE of viruses in the cell, quantity of TCID50/ml is determined. Finally, supplementary tests are done to evaluate virus existence in the considered cell such as PCR, AGID, H&D dying and skin test conducted on commercial poultries.

Results: In this study it is indicated that razi2 cell is strongly able to proliferation of FPV and the titer of (TCID50/ml) on razi2 cells for FPV is only 1×106/5 after 6 passages. The MTT assay and PCR prove acceptable sensitivity of the mentioned cell against FPV.

Conclusion: Razi2 cell line is the best cell line in order to replace for chicken or duck embryo fibroblastic cell lines and to duplicate fowl pox virus (FPV).

Keywords: Cell Culture; Razi 2 Cell Line; Fowl Pox Virus